

An aberrant form of the adzuki bean borer, *Ostrinia scapularis* (Lepidoptera, Crambidae, Pyraustinae)

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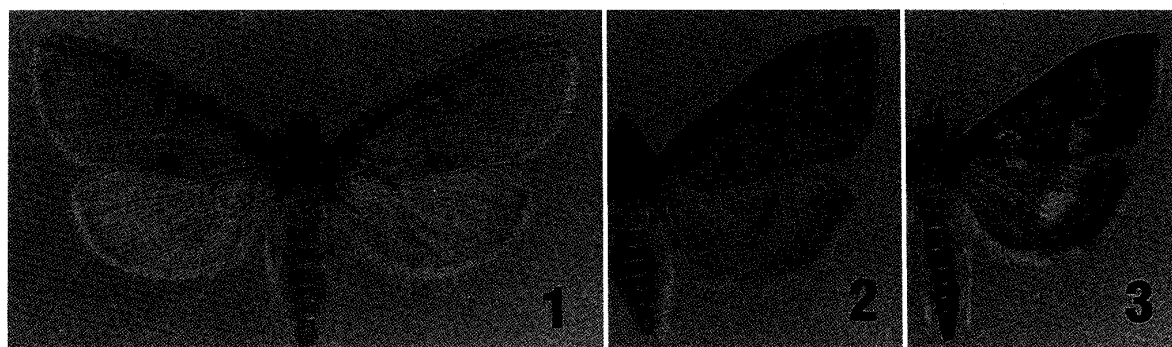
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Abstract A reared specimen of *Ostrinia scapularis* expressing aberrant wing markings is figured and described.

Key words *Ostrinia scapularis*, wing maculation, aberrant phenotype.

The adzuki bean borer, *Ostrinia scapularis*, is a polyphagous species, the larva feeding on many plants including crops such as the leguminous beans *Phaseolus vulgaris* and *P. angularis* and the hop *Humulus lupulus* (Hattori and Mutuura, 1987). This moth shows marked sexual dimorphism in the coloration of wings and the structure of mid tibia, and has several morphologically similar relatives (Mutuura and Munroe, 1970). One brood of *O. scapularis* obtained through a cross in the laboratory produced one female showing aberrant maculation (Fig. 1) along with normal individuals (Figs 2–3). The present paper aims to describe the wings of this abnormal female in comparison with normal females.

Description of an aberrant female. Forewings 13.0 mm long; hindwings 9.5 mm long. Wings normal in size and shape except for apex of right forewing rather rounded probably because of mal-extension in eclosion. Forewing yellowish buff, paler than in normal females; antemedial, postmedial, subterminal and terminal lines almost obsolete; antemedial and discocellular spots dark fuscous and very distinct as in normal females; a weak fuscous spot present near middle of dorsum, while absent in normal females; fringe whitish buff, somewhat frizzled, paler and shorter than in normal females. Hindwing whitish buff; the color within the variation in normal females; discocellular spot dark fuscous, more distinct than in normal females; postmedial and subterminal lines almost obsolete, reduced to small



Figs 1–3. Individuals from one brood of *Ostrinia scapularis* reared in the laboratory. 1. Female with aberrant maculation. 2. Normal female. 3. Normal male.

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fuscous dots, each of the dots being composed of one or a few scales; terminal line yellowish buff, with some fuscous scales, paler and more obscure than in normal females; fringe as in forewing.

Materials. Parents of the aberrant female were reared on a naturalized bur-marigold, *Bidens frondosa*, collected at the estuary of Ishidagawa R., Sawata-Town, Sado I., Niigata Pref., Japan on 27 Oct. 1997. The brood was bred using an artificial diet, Insecta LF (Nihon-Nosan-Kogyo, Yokohama, Japan). The aberrant female emerged on 9 Sep. 1998. Specimens were identified as *O. scapularis* based on the morphology of male adults (see Hattori and Mutuura, 1987; Ohno, 1999).

Remarks. The aberrant specimen described above seems to be important for understanding the genetic and developmental mechanisms for the expression of wing markings. The obsolete lines and the distinct spots in the wings of the aberrant individual may suggest that the developmental processes of these lines and spots are independent of each other, and are dominated by different genes. *Bidens frondosa* is recorded for the first time as a host plant of *O. scapularis*.

Acknowledgements

I am grateful to S. Takagi and S. Akimoto, Hokkaido University, for their critical comments on the manuscript. My thanks are also due to S. Nakagawa and his family, Niigata Pref., for their great support on collecting materials in Sado Island.

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摘 要

アズキノメイガの斑紋異常個体 (大野 豪)

佐渡島にてアメリカセンダングサから採集されたアズキノメイガから子孫世代を得て、人工飼料によって飼育したところ、通常の個体とは翅の斑紋が著しく異なるメス1個体を見いだしたため、ここに図示および記載した。この個体は、斑紋の線要素がほとんど消失している一方で、斑点要素においては正常メスと同等か、あるいはそれ以上に明瞭であった。この事実は、線要素と斑点要素の発現プロセスが互いに独立しており、異なる遺伝子に支配されていることを示唆しているのかもしれない。

(Accepted March 11, 2000)